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DxMONITOR

Animal Health Report

A Quarterly Report of the National Animal Health Reporting System

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Fall 1997

The DxMONITOR reports trends and geographic distributions of clinical disease diagnoses and animal health information collected from veterinary diagnostic laboratories, State veterinarians, and the USDA:APHIS.

The DxMONITOR Animal Health Report is distributed quarterly as part of the National Animal Health Reporting System (NAHRS). The NAHRS is a cooperative effort of the American Association of Veterinary Laboratory Diagnosticians (AAVLD), the United States Animal Health Association (USAHA), and the United States Department of Agriculture, Animal and Plant Health Inspection Service (USDA:APHIS).

Caution should be taken when extrapolating information reported in the DxMONITOR due to the inherent biases of submitted specimens. Trends should be interpreted with care.

In this issue: The disease reporting period for new data was April 1 through June 30, 1997. Data have been reported by the National Veterinary Services Laboratories (NVSL) and the APHIS:Veterinary Services program staffs.



DxMONITOR Animal Health Report

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**Articles may be reprinted with
acknowledgment of source.**

This section presents short descriptions of current investigations, outbreaks, news items, events or articles of potential interest to diagnostic laboratories. The purpose is to provide a forum for timely exchanges of information about veterinary diagnostic laboratory and animal health activities.

Bovine Brucellosis and Tuberculosis Update

The following updates may not agree with data presented in later sections of this report, because they are for more recent time periods.

During August and September of 1997, Iowa and Kentucky were advanced to Free status for bovine brucellosis.

During September of 1997, Virginia regained its Accredited Free status for bovine tuberculosis.

Contact: USDA:APHIS:VS, National Animal Health Programs Staff, Riverdale, Maryland, (301) 734-8711.

1997 Vesicular Stomatitis Virus (VSV) Outbreak in the United States

The following information is excerpted from the 17th weekly vesicular stomatitis (VSV) outbreak update and is accurate up to 1 p.m. on Monday, September 29, 1997. The current outbreak began with a positive premise confirmed in Arizona the week of May 26 and has spread to include positive premises in Colorado, New Mexico, and Utah.

Figure 1 shows the number of positive premises by week and State for the 1997 VSV outbreak as of September 29, 1997.

Table 1 (page 2) shows a summary of investigations as of September 29, 1997. The viral agent does not have to be isolated for a case to be considered positive.

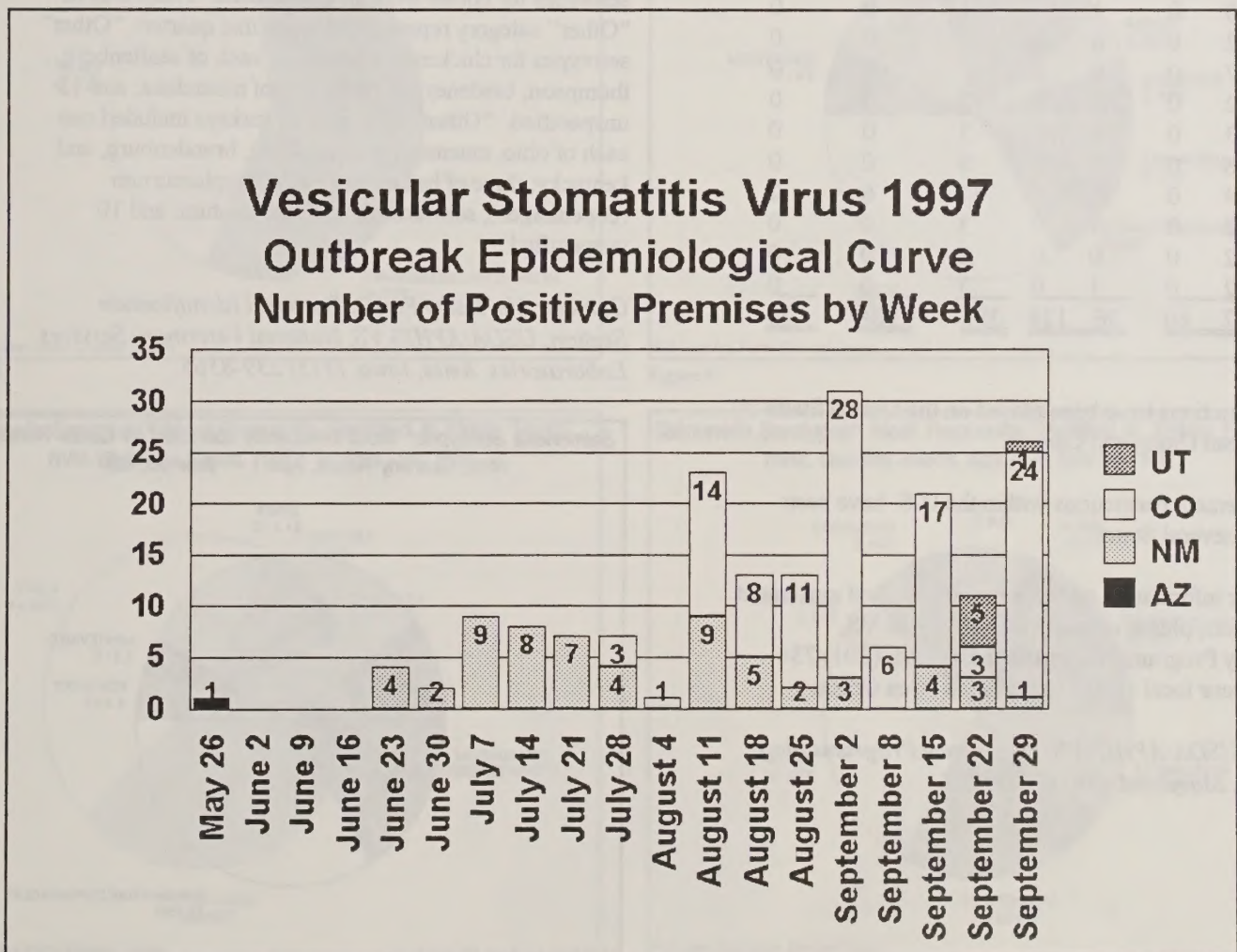


Figure 1

Table 1. Number of Premises Investigated for VSV.

State	Investigations		Investigations		Total Invest	Total Positive	Agent Isolated
	Closed Neg	Closed Pos	Open Pnd	Open Pos			
AL	2	0	0	0	2	0	0
AR	2	0	0	0	2	0	0
AZ	15	1	2	0	18	1	0
CA	2	0	2	0	4	0	0
CO	58	20	23	95	196	115	25
GA	3	0	0	0	3	0	0
IA	1	0	0	0	1	0	0
ID	1	0	2	0	3	0	0
IL	5	0	0	0	5	0	0
IN	1	0	0	0	1	0	0
KS	6	0	0	0	6	0	0
KY	1	0	0	0	1	0	0
LA	4	0	1	0	5	0	0
MA	2	0	0	0	2	0	0
MI	1	0	0	0	1	0	0
MN	1	0	0	0	1	0	0
MO	3	0	0	0	3	0	0
ND	1	0	0	0	1	0	0
NE	2	0	0	0	2	0	0
NJ	2	0	0	0	2	0	0
NM	32	39	2	23	96	62	7
NV	0	0	1	0	1	0	0
OH	2	0	0	0	2	0	0
OK	7	0	0	0	7	0	0
OR	2	0	0	0	2	0	0
TN	3	0	0	0	3	0	0
TX	8	0	0	0	8	0	0
UT	4	0	1	6	11	6	2
VA	2	0	1	0	3	0	0
WA	2	0	0	0	2	0	0
WY	2	0	1	0	3	0	0
Totals	177	60	36	124	397	184	34

Trade restrictions have been placed on the United States by the European Union and Canada.

State movement restrictions within the U.S. have been placed by several States.

For further information on trade restrictions and movement requirements, please contact USDA:APHIS:VS, Emergency Programs, Riverdale, Maryland, (301) 734-8073, or your local USDA:APHIS:VS Area Office.

Contact: USDA:APHIS:VS, Emergency Programs Staff, Riverdale, Maryland, (301) 734-8073.

National Veterinary Services Laboratories' Quarterly *Salmonella* Serotype Report

This article is excerpted from the National Veterinary Services Laboratories' (NVSL) Quarterly *Salmonella* report. This report summarizes *Salmonella* serotype distribution and frequency data accumulated by the NVSL during the period of April 1 through June 30, 1997.

The most common serotype results are included for *Salmonella* cultures from livestock species submitted to the NVSL for identification.

Figures 2 through 7 show the most commonly identified *Salmonella* serotypes of clinical isolates in cattle, swine, horse, sheep, chicken, and turkey operations. Clinical isolates are those submitted from animals with primary or secondary *Salmonella* infections.

Salmonella serotypes included in the "Other" category for cattle included 10 dublin and 88 unspecified. "Other" serotypes for swine included two mbandaka, seven worthington, nine anatum, and 80 unspecified. "Other" serotypes for horses were all unspecified. There was no "Other" category reported for sheep this quarter. "Other" serotypes for chickens included one each of senftenberg, thompson, bredeney, and lille; two of mbandaka; and 13 unspecified. "Other" serotypes for turkeys included one each of ohio, muenster, johannesburg, brandenburg, and kentucky; three of hadar; four each of typhimurium (copenhagen), schwarzengrund, and anatum; and 10 unspecified.

Contact: Ms. Kathy Ferris, Bacterial Identification Section, USDA:APHIS:VS, National Veterinary Services Laboratories, Ames, Iowa, (515) 239-8565.

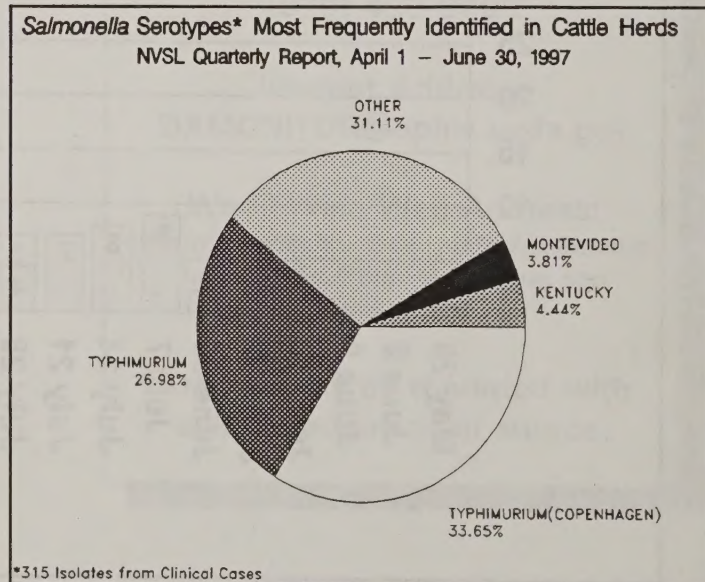
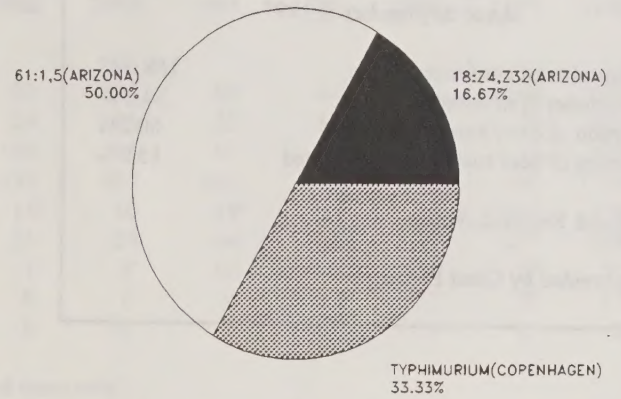


Figure 2

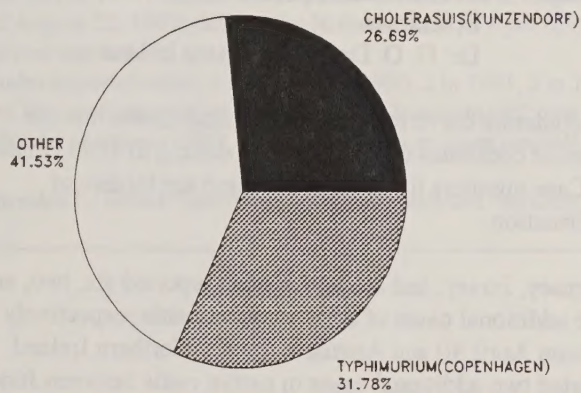
Salmonella Serotypes* Most Frequently Identified in Sheep Flocks
NVSL Quarterly Report, April 1 – June 30, 1997



*6 Isolates from Clinical Cases

Figure 5

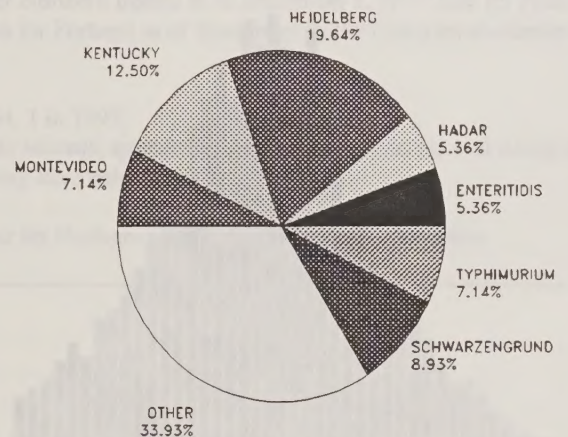
Salmonella Serotypes* Most Frequently Identified in Swine Herds
NVSL Quarterly Report, April 1 – June 30, 1997



*236 Isolates from Clinical Cases

Figure 3

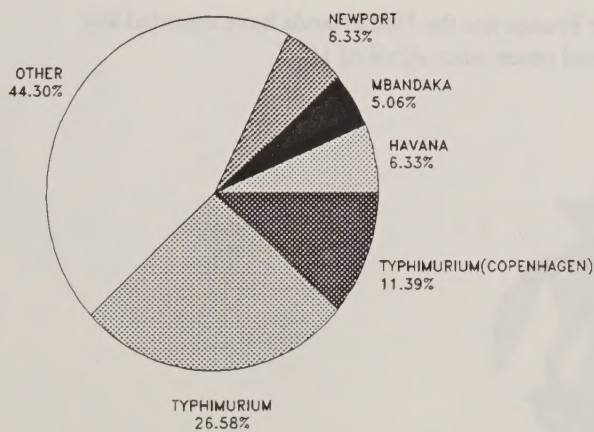
Salmonella Serotypes* Most Frequently Identified in Chicken Flocks
NVSL Quarterly Report, April 1 – June 30, 1997



*56 Isolates from Clinical Cases

Figure 6

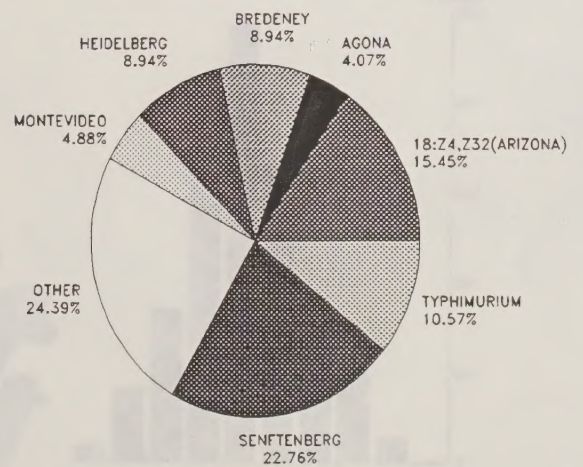
Salmonella Serotypes* Most Frequently Identified in Horse Herds
NVSL Quarterly Report, April 1 – June 30, 1997



*79 Isolates from Clinical Cases

Figure 4

Salmonella Serotypes* Most Frequently Identified in Turkey Flocks
NVSL Quarterly Report, April 1 – June 30, 1997



*123 Isolates from Clinical Cases

Figure 7

**Bovine Spongiform Encephalopathy
Descriptive Epidemiology Statistics
for Great Britain***
As of September 5, 1997

Total number of confirmed cases:	168,695
Total number of affected herds:	34,181
Proportion of dairy herds affected:	60.2%
Proportion of beef suckler herds affected:	15.9%

* England, Scotland, Wales

Data provided by Great Britain.

Table 2

International Bovine Spongiform Encephalopathy Update

The bovine spongiform encephalopathy (BSE) update for Great Britain and other BSE affected countries is presented here in the LabNEWS. The update for the United States BSE surveillance activities can be found in the Patterns of Selected Clinical Cattle Diseases Section.

United Kingdom Update:

Source: Dr. J. Wilesmith, Great Britain

Great Britain reported 1,100 newly confirmed cases of BSE (Table 2) with 87 more herds affected between May 30 and September 5, 1997. The epidemic in Great Britain continues to decline and is at its lowest point since peaking in the fourth quarter of 1992 (Figure 8).

Other BSE Affected Countries:

Sources: Dr. T. Chillaud, Office International des Epizooties
Dr. G. O. Denny, Northern Ireland

The epidemic curve for Northern Ireland shows that the epidemic continues to decline after peaking in 1993 (Figure 9). Case numbers for Northern Ireland are by date of confirmation.

Guernsey, Jersey, and the Isle of Man reported six, two, and three additional cases of BSE in native cattle respectively between April 30 and August 8, 1997. Northern Ireland reported two additional cases in native cattle between June 1 and September 1, 1997. The Republic of Ireland reported 11 additional cases in native cattle between April 30 and August 8, 1997. Switzerland reported eight additional cases in native cattle between May 16 and August 22, 1997. Portugal reported seven additional cases in native cattle between June 4 and September 3, 1997 (Table 3, page 5).

Neither France nor the Netherlands have reported any additional cases since April of 1997.

**Number of New Cases of BSE in Great Britain
by Quarter of Onset of Clinical Signs
September 1986 – September 5, 1997**

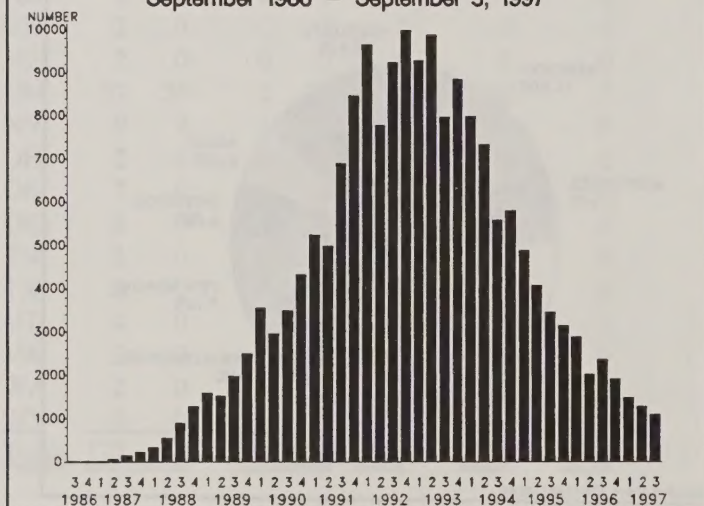


Figure 8

**Number of Confirmed Cases* of BSE in Northern Ireland
1988 – September 1, 1997**

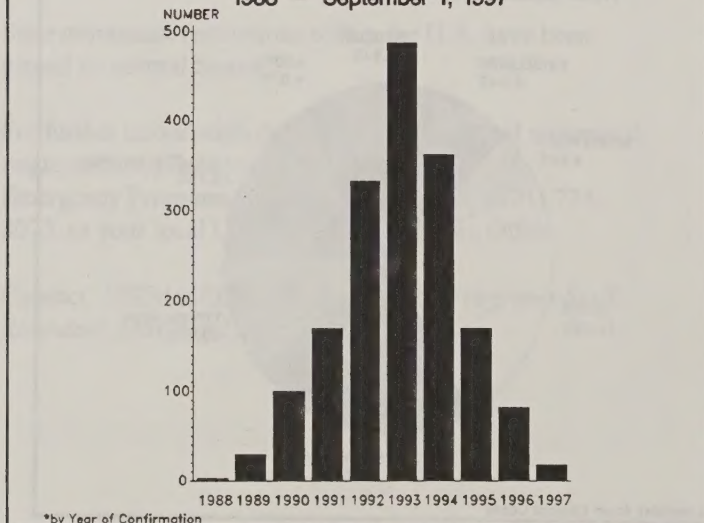


Figure 9

BSE Cases¹ Worldwide Other Than Great Britain as of September 10, 1997 (Provisional Data)

Country ²	1987 and earlier	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total
Guernsey	4	34	52	83	75	92	115	69	44	36	25 ³	629
Jersey	0	1	4	8	15	24	35	22	10	12	2 ³	133
Isle of Man	0	6	6	22	67	109	111	55	33	11	6 ³	426
Northern Ireland	0	3	30	100	170	333	487	363	170	82	18 ³	1756
Republic of Ireland ⁶	0	0	15 ⁵	14 ⁵	17 ⁵	18 ⁵	16	19 ⁵	16 ⁵	73	41 ³	229
Switzerland	0	0	0	2	8	15	29	64	68	45	27 ³	258
Portugal	0	0	0	1 ⁴	1 ⁴	1 ⁴	3 ⁴	12	14	29	16 ³	77
France	0	0	0	0	5	0	1	4	3	12	2 ³	27
Netherlands	0	0	0	0	0	0	0	0	0	0	2 ³	2

Countries with imported cases only:

Canada: 1 case (11/93)

Falkland Islands: 1 case (1989)

Italy: 2 cases (10/94)

Denmark: 1 case (07/92)

Germany: 5 cases (1 in 1992, 3 in 1994, 1 in 1997)

Oman: 2 cases (1989)

1. Cases in native cattle and cattle imported from the U.K. or another country with endemic BSE.
2. In order of first reported case/diagnosis.
3. Data for Guernsey, Jersey, and the Isle of Man as of August 10, 1997; data for Northern Ireland as of September 1, 1997; data for France as of April 8, 1997; data for the Republic of Ireland as of August 8, 1997; data for Portugal as of September 3, 1997; data for Switzerland as of August 22, 1997; data for the Netherlands as of April 8, 1997.
4. Imported cases.
5. Includes imported cases: 5 in 1989, 1 in 1990, 2 in 1991, 2 in 1992, 1 in 1994, 1 in 1995.
6. All of the cases reported by the Republic of Ireland to OIE have been in female animals, apart from one imported 5-year old bull which was confirmed positive in 1989. There have been no cases reported to date in young male animals, i.e. steers or bulls.

Data provided by Office International des Epizooties and Northern Ireland. Cases for Northern Ireland are by date of confirmation.

Table 3



I. Patterns of Selected Animal Distributions

Section I contains information on the distribution of selected animals in the United States. The distribution may reflect the commercial food animal production or the location of individual animals. The purpose of reporting these patterns is to provide data on the location and density of the different animal species included in the National Animal Health Reporting System.

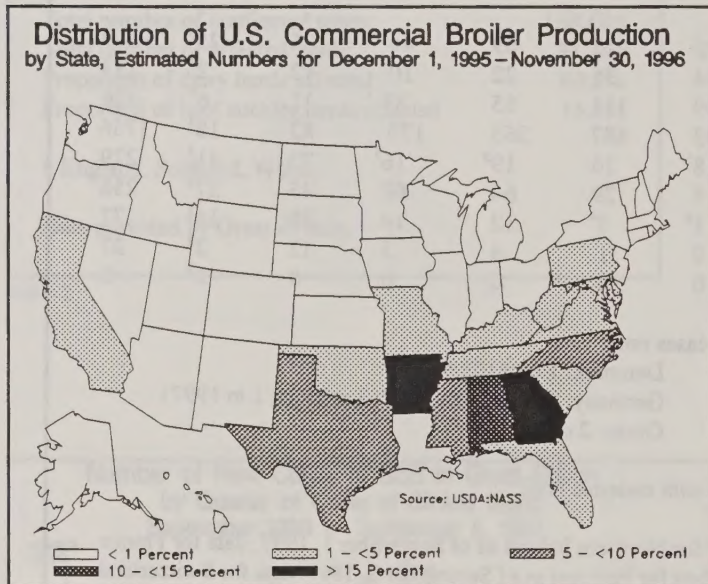


Figure 10

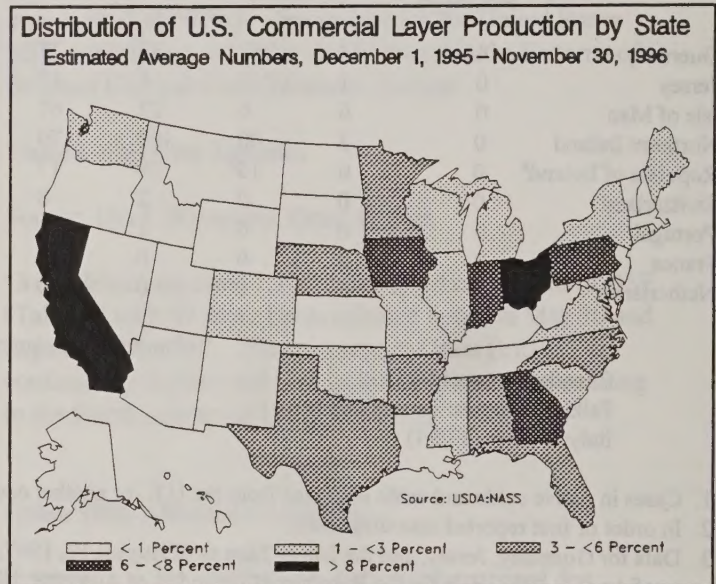


Figure 11

Figures in this section show the contribution of each State to the U.S. total for a commodity or a sub-set of selected States for a commodity. Estimates are based on USDA:National Agricultural Statistics Service (NASS) survey data (Figures 10 through 21) or U.S. Census Bureau data (Figure 22). Inventory estimates were used for all commodities except for poultry and trout, where production was used. Maps with gaps between percent ranges had no States in those ranges (e.g., in Figure 12, where 1-<5 percent skips to 7-<16 percent, there were no States with percents between 5 and 7).

Commercial broiler production distribution (Figure 10) is the percentage of 7,598,200,000 estimated birds, from December 1, 1995, through November 30, 1996. This number includes broilers and other domestic meat-type breeds of chickens. Values from the States of Connecticut, Illinois, Indiana, Louisiana, North Dakota, and South Dakota were combined by NASS to avoid disclosure of individual operations. The total combined numbers provided a value which was 2.6 percent of the whole with each State represented as an average percentage of 0.4.

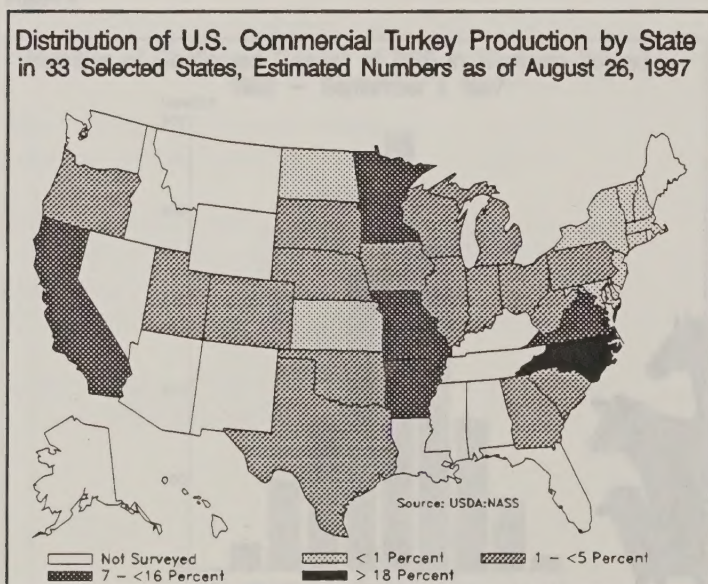


Figure 12

Commercial layer production distribution (Figure 11) is the percentage of 297,483,000 estimated birds, from December 1, 1995, through November 30, 1996. This number includes layers of both table and hatching eggs.

Commercial turkey production distribution (Figure 12) is the percentage of 302,819,000 estimated birds in 33 selected States as of August 26, 1997. Values from the States of Georgia, Michigan, Nebraska, Oklahoma, Oregon, Texas, Utah, and Wisconsin were combined by NASS to avoid disclosure of individual operations. The total combined numbers provided a value which was 10.3 percent of the whole with each State represented as an average percentage of 1.3.

Inventory estimates for U.S. cattle distributions shown on this page are all the percentages of the estimated number of head on hand on January 1, 1997. Distribution of the total cattle and calf estimated inventory (Figure 13) is the percentage of 101,208,700 head. Distribution of the estimated inventory of milk cows that calved (Figure 14) is the percentage of 9,208,900 head. Distribution of the estimated inventory of beef cows that calved (Figure 15) is the percentage of 34,279,800 head. Figure 16 shows distribution of the estimated inventory of cattle and calves on feed as the percentage of 13,216,000 head.

Distribution of the estimated inventory of Angora goats (Figure 17) is the percentage of 1,127,000 head on hand in four selected States on January 1, 1997.

Figure 18 shows distribution of the estimated inventory of sheep and lambs as the percentage of 7,937,200 head on hand on January 1, 1997, which includes breeding and market animals.

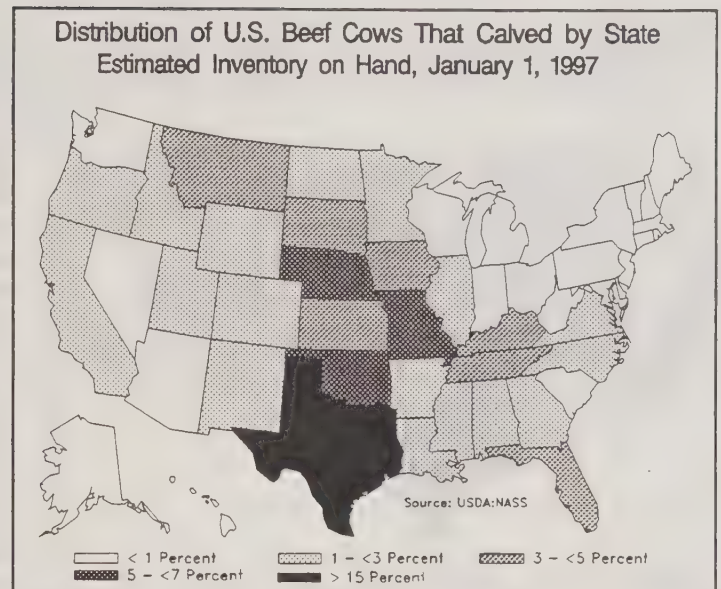


Figure 15

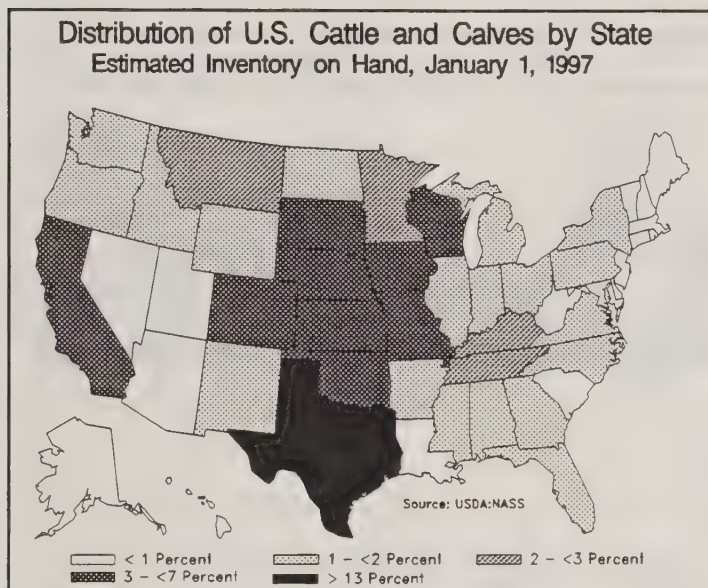


Figure 13

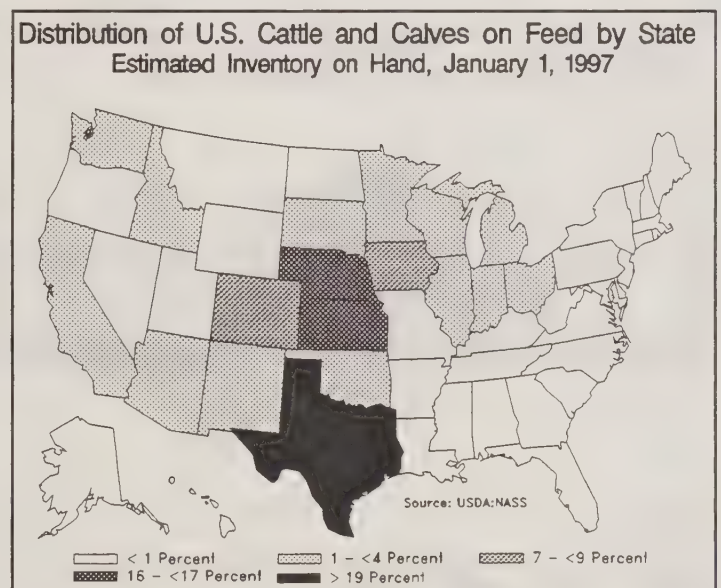


Figure 16

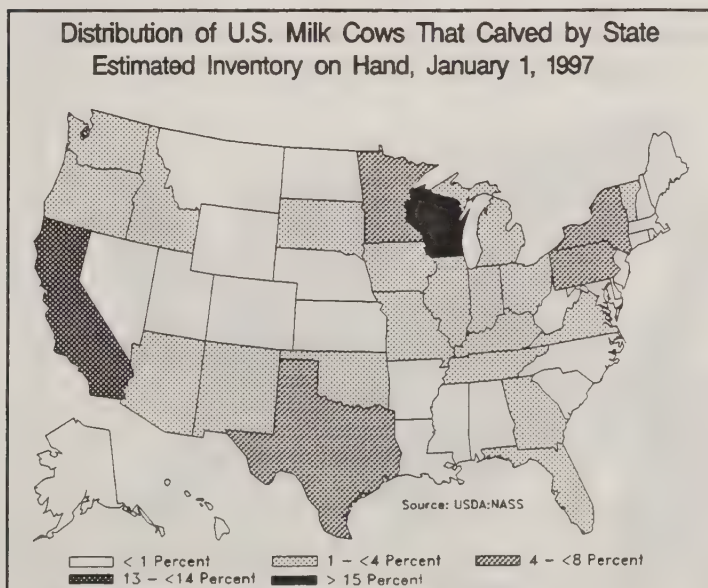


Figure 14

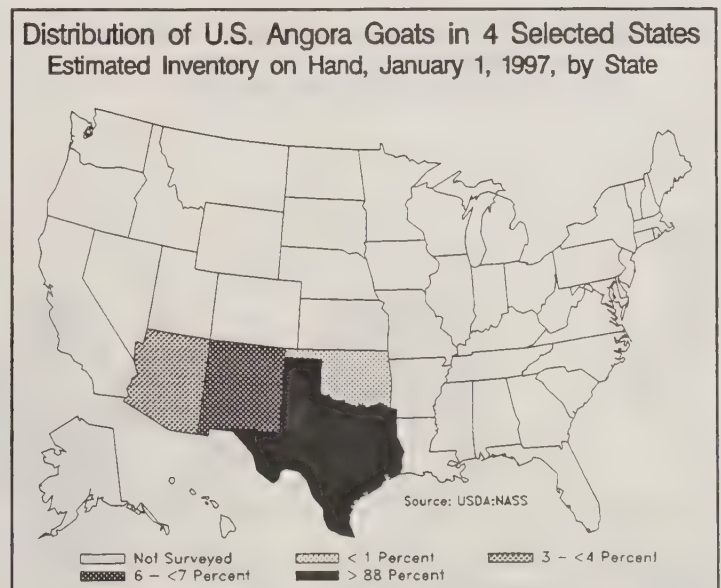


Figure 17

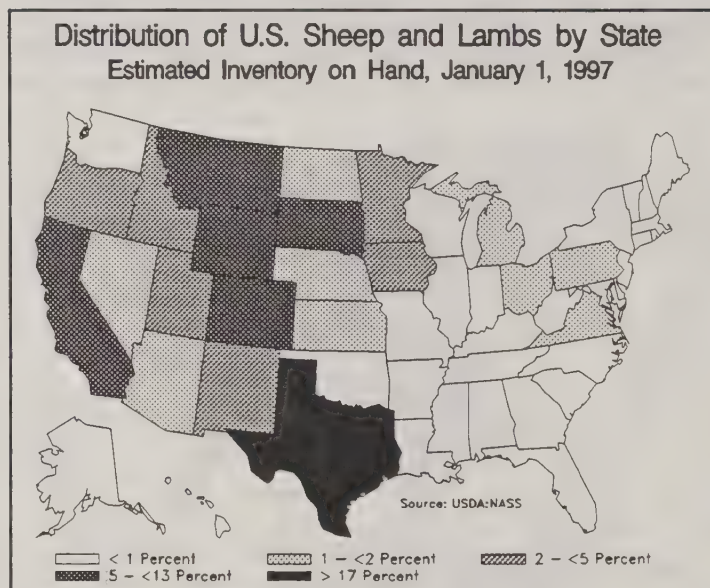


Figure 18

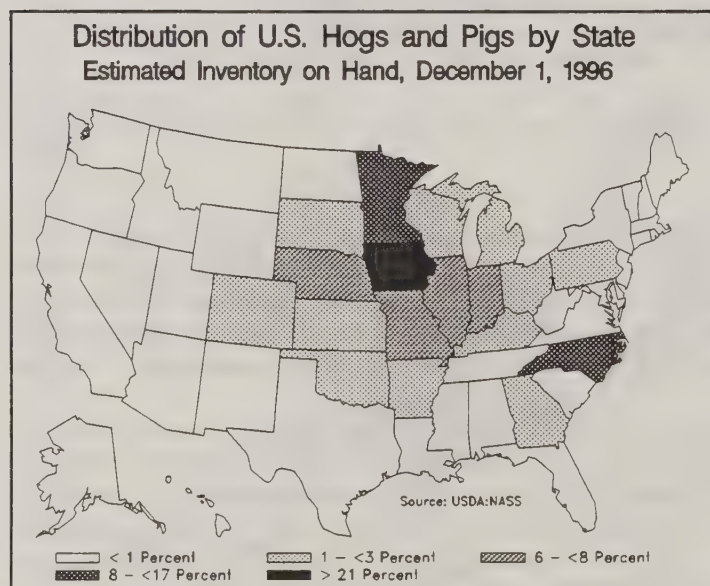


Figure 19

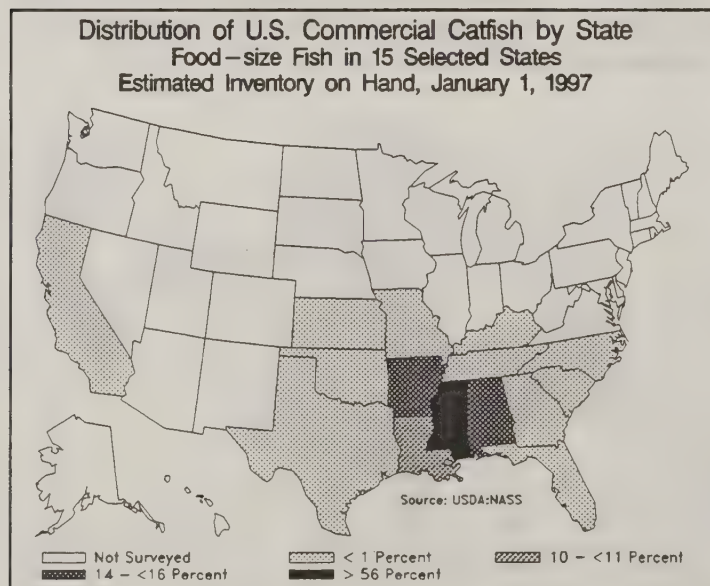


Figure 20

Figure 19 shows distribution of the estimated inventory of hogs and pigs as the percentage of 56,171,000 head on hand on December 1, 1996, which includes breeding and market animals.

Distribution of the estimated inventory of commercial catfish (Figure 20) is the percentage of 270,833,000 total food-size fish on hand in 15 selected States on January 1, 1997. Commercial trout production distribution (Figure 21) is the percentage of 58,978,000 estimated fish processed in 18 selected States between September 1, 1996, through August 31, 1997.

Distribution of the estimated inventory of horses and ponies on farms (Figure 22) is the percentage of 2,049,522 head in the U.S. according to the 1992 Census of Agriculture. A farm is defined by the Census and USDA as any place that produces and sells \$1,000 or more in agricultural products, or has at least five horses. This definition does not include horses located at service-oriented facilities such as stables, racetracks, or boarding facilities.

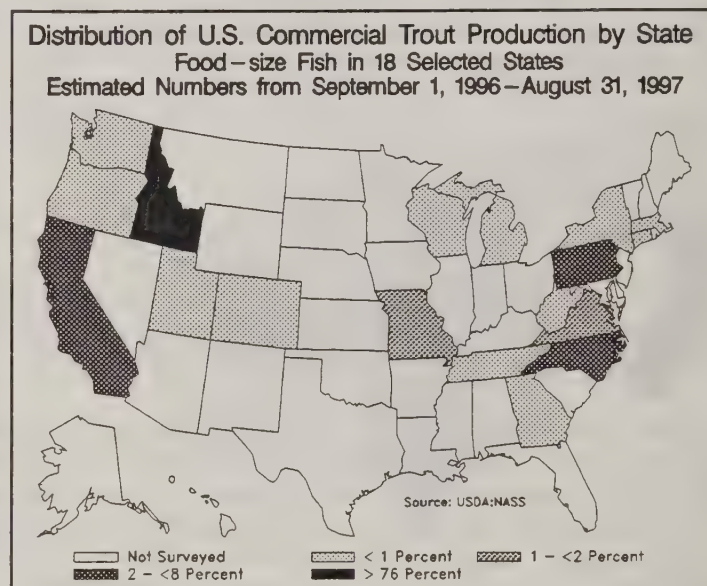


Figure 21

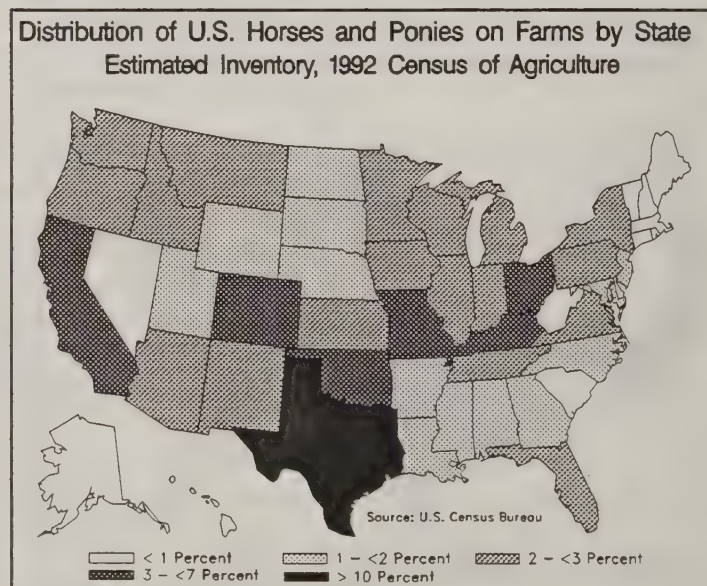


Figure 22

II. Patterns of Selected Clinical Cattle Diseases

Section II contains information on selected cattle diseases of interest as designated by the Office International des Epizooties (OIE) and other sources. The purpose of reporting these data is to monitor confirmed cases of specific diseases on a State-by-State or regional basis so that national distributions may be mapped and evaluated.

Bovine Brucellosis	10
U.S. Surveillance for Bovine Spongiform Encephalopathy	11
Bovine Tuberculosis	12

Key to Figures in this Section:

- Data on regulatory diseases are presented by State classification for that disease, where applicable. Graphics may include maps, graphs, charts, or tables.



□ Bovine Brucellosis

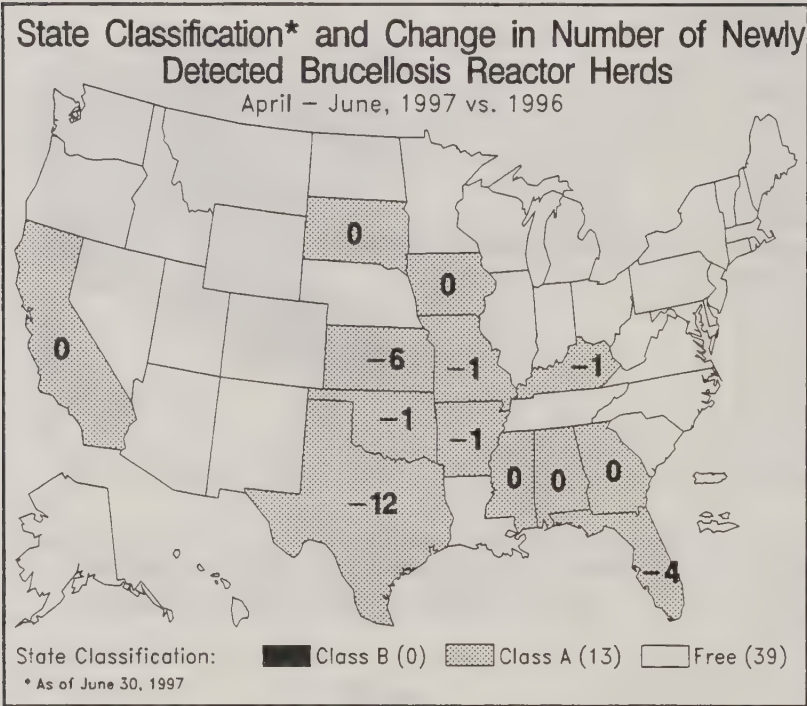


Figure 23

Source: Dr. Sara Kaman
USDA:APHIS:VS
National Animal Health Programs
(301) 734-8711

Reactor herd: Herd with at least one case of brucellosis confirmed by serology or culture.

Definition of State Classifications:

Class B: More than 0.25 percent, but less than 1.5 percent of all herds infected.

Class A: No more than 0.25 percent of all herds infected.

Free: No infected herds under quarantine during the past 12 months.

There were no changes in State classification for bovine brucellosis from April through June 1997. All States held Class A or Free status in the bovine brucellosis program at the time this report was released. Thirty-seven States plus Puerto Rico and the U.S. Virgin Islands were classified as Free of bovine brucellosis.

All of the Class A States either had decreased numbers of newly detected bovine brucellosis herds or no change in the number detected between April 1 and June 30, 1997, compared to the same period in 1996 (Figure 23).

For the entire U.S., there were 11 newly detected bovine brucellosis reactor herds from April through June 1997 (Figure 24), four fewer than were newly detected from January through March 1997.

The 11 brucellosis reactor herds detected in the second quarter of 1997 were 26 fewer than were detected during the same quarter in 1996 (Figure 25).

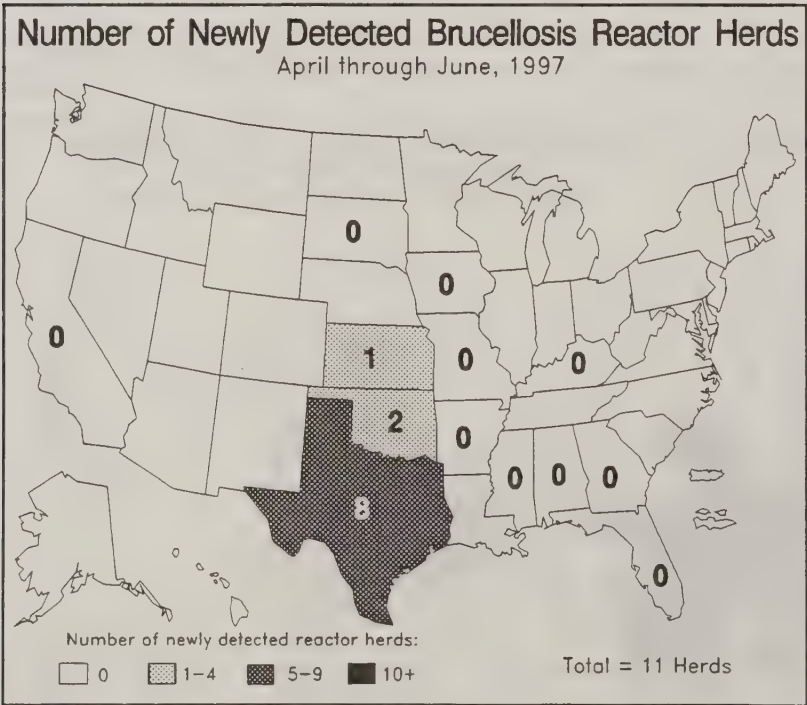


Figure 24

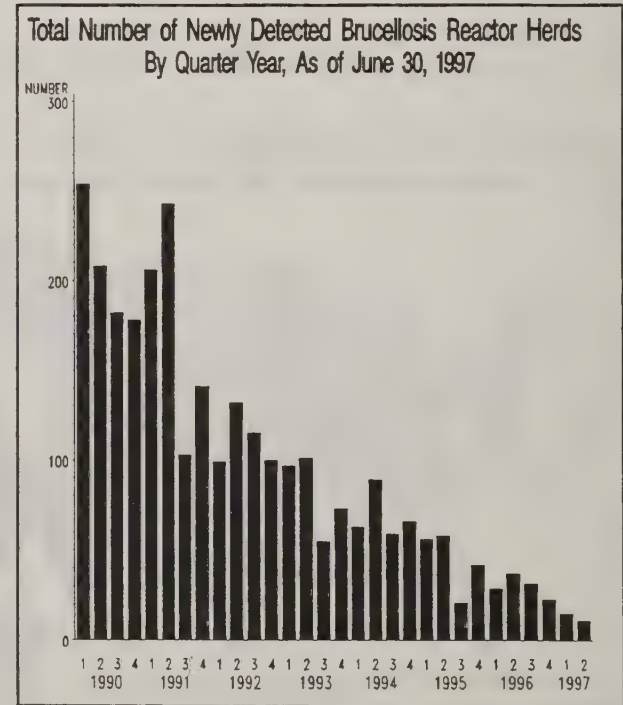


Figure 25

□ U.S. Surveillance for Bovine Spongiform Encephalopathy (BSE)

Source: Dr. Art Davis
 USDA:APHIS:VS
 National Veterinary Services Laboratories
 Diagnostic Pathobiology Laboratory
 (515) 239-8521

Surveillance for bovine spongiform encephalopathy (BSE) in the United States continues. The National Veterinary Services Laboratories (NVSL) reported examination of an additional 222 bovine brains from June 30 through September 30, 1997 (Figure 26). These 222 brains were either examined directly by NVSL or represent examination results reported to NVSL by veterinary diagnostic laboratories (VDLs). Results reported to NVSL by VDLs are for cattle at least 20 months of age with central nervous disease signs.

The total number of U.S. bovine brain submissions for BSE surveillance was 6,263 as of September 30, 1997. This number includes 69 cattle imported from Britain. The negative Canadian import submitted from Montana originated from the BSE index herd in Canada.

No evidence of BSE has been found in any U.S. native born cattle or in any of the import cattle examined.

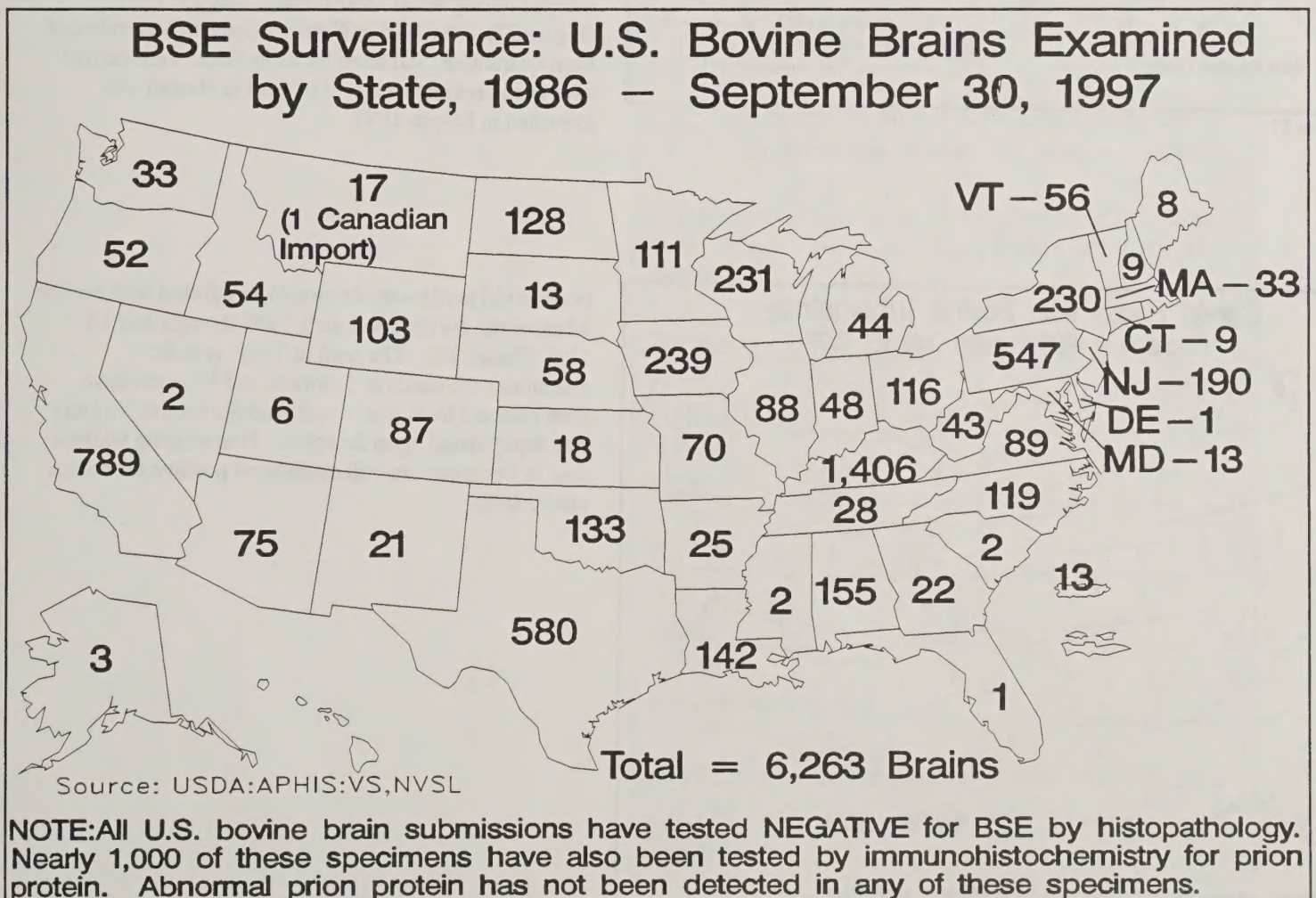


Figure 26

□ Bovine Tuberculosis

Source: Dr. Mitch Essey
USDA:APHIS:VS
National Animal Health Programs
(301) 734-8711

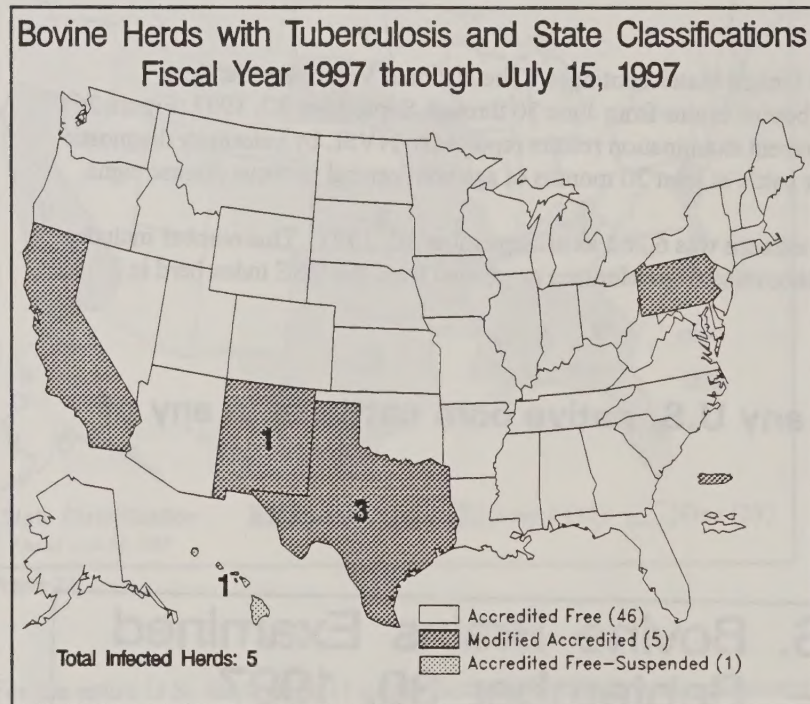


Figure 27

Infected = Laboratory confirmed existence of *Mycobacterium bovis*.

Definition of State Classifications:

Modified Accredited: Meets all standards of the Bovine Tuberculosis Eradication, Uniform Methods and Rules for Modified Accredited States and has had *M. bovis* herd infections within the program for a 5-year period.

Accredited Free: Adequate surveillance programs have identified no infected bovines for 5 or more years.

Virginia and Wisconsin were restored to Accredited Free status for bovine tuberculosis between March 31 and July 15, 1997. Hawaii's Accredited Free status was suspended on July 3 after confirmation of an infected herd. There were five cattle or bison herds known to be infected during fiscal 1997 through July 15, 1997 (Figure 27). The herd in New Mexico has been released from quarantine. All three herds in Texas were carried over from previous years. The herd in Hawaii was identified in March 1997.

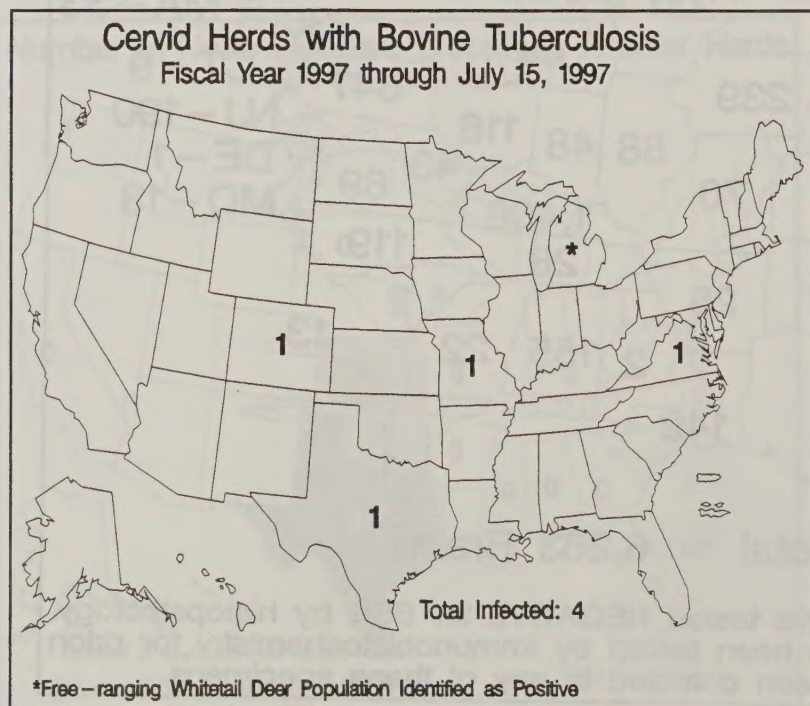


Figure 28

Four cervid herds were known to be infected with bovine tuberculosis during fiscal year 1997 through July 15, 1997 (Figure 28). The herd in Texas is under quarantine, the herds in Colorado and Missouri have been released from quarantine, and the herd in Virginia was depopulated upon detection. Free-ranging whitetail deer in Michigan are still considered positive for bovine tuberculosis.

LabNEWS Article Submissions are Encouraged

Readers of the DxMONITOR Animal Health Report are encouraged to submit items suitable for the "LabNEWS". All articles should be typed double spaced. Photos/artwork should be camera ready copy. If possible, please provide your article on diskette and indicate what type of software was used to create/store the file (i.e., WordPerfect, Word Star). Send submissions to the address on the inside front cover of this report.

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